

Snus saves lives

A study of snus and tobacco-related mortality in the EU

Contents

Summary	3
Introduction	3
What is The Snus Commission?	4
The Snus Commission's members	5
Approach	6
Results	7
Tobacco-related heart and cardiovascular diseases	7
Tobacco-related cancer	9
Total tobacco-related mortality	9
What do other researchers say?	11
The Commission's conclusions	13
Statistical basis: Tobacco-related mortality among men over the age of 30 in the EU, 2004	15
Appendix A. Table 7. Number of tobacco-related deaths, heart and cardiovascular diseases among men over the age of 30 in the EU, 2004	16
Appendix B. Table 8. Tobacco-related deaths, cancer among men over the age of 30 in the EU, 2004	17
Appendix C. Table 9. Total tobacco-related deaths among men over the age of 30 in the EU, 2004	18

Compilation of tables included in the report:

Table 1. Number of deaths attributable to tobacco-related heart and cardiovascular diseases per year, men over 30 in the EU + Norway (2004)	8
Table 2. Number of deaths attributable to tobacco-related cancer per year, men over 30 in the EU + Norway (2004)	8
Table 3. Number of deaths attributable to tobacco per 100,000 inhabitants per year, all causes of death in the EU + Norway (2004)	10
Table 4. Number of deaths attributable to tobacco (men over 30) per year that could have been spared had tobacco habits been the same as in Sweden, all causes of death (2004)	11
Table 5. Number of people who smoke on a daily basis among men in the EU + Norway	12
Table 6. Mortality attributable to tobacco per 100,000 inhabitants (men over 30), all causes of death in the EU + Norway (2004)	14
Table 7. Number of tobacco-related deaths, heart and cardiovascular diseases among men over the age of 30 in the EU + Norway, 2004	Appendix A
Table 8. Tobacco-related deaths, cancer among men over the age of 30 in the EU + Norway, 2004	Appendix B
Table 9. Total tobacco-related deaths among men over the age of 30 in the EU + Norway, 2004	Appendix C

Summary

This report demonstrates the difference between the current level of tobacco-related mortality in EU countries and the level that would have been achieved had all other EU countries adopted the same tobacco consumption patterns as in Sweden. The basis for the figures in the report consists of data from the World Health Organization (WHO) Global Report: Mortality Attributable to Tobacco (Geneva, 2012). The data processing was carried out by Institutet för Tobaksstudier (Institute for Tobacco Studies) and a compilation of the data was put at our disposal. The figures refer to men over the age of thirty in each individual country and concern several groups of diseases. The report shows that Sweden has the lowest tobacco-related mortality rate of all EU countries relative to its population size. As compared with Sweden, tobacco-related mortality rates are more than twice as high relative to population size in 24 of the other 27 EU member states.

In total and among men over the age of 30, 355,000 lives per year could have been saved if the other EU countries had matched Sweden's tobacco-related mortality rate. Sweden clearly has the lowest tobacco-related mortality rate within the EU in relation to its population size, despite daily tobacco consumption among men being at the same level as other countries in Europe. Sweden is also the only country in the EU where snus is permitted. There is a clear connection here – snus is a significantly less dangerous product than cigarettes: the difference in terms of health effects corresponds to hundreds of thousands of lives per year in Europe. Snus enables Sweden to have a uniquely low number of smokers, and it is difficult to ignore the connection

between the low level of smokers and the uniquely low tobacco-related mortality rate. In other words, the tobacco-related mortality rate would have been lower across the EU today had snus been permitted within the union over the past few decades.

Introduction

Cigarette smoking is the single greatest threat to health in the developed world; up to 6,000 hazardous substances and particles are released when a cigarette is lit. Similarly, a reduction in cigarette smoking is the single most important factor in terms of improving health in major parts of the world. According to the World Health Organization (WHO), 5 million people die each year from smoking cigarettes¹. In one of our previous reports, “The health effects of snus”, we highlighted a major difference in the impact on health depending on the type of tobacco consumed. We noted in that report that snus does not cause cancer and that the overall negative health effects of using snus are minor. This is in sharp contrast to the extensive impact on health caused by smoking cigarettes.

This report provides an answer to an important question: **How many lives would have been saved if the consumption of both snus and cigarettes had been the same in the rest of the EU as in Sweden?** If public health is to be improved and the number of deaths reduced by replacing cigarette smoking with snus, the ban on sales of snus within the EU needs to be lifted. If different political decisions were taken, the mortality rate from tobacco throughout the EU could fall to the levels seen in Sweden. Our belief is that the EU banned the wrong type of tobacco product when it focused on snus.

¹ WHO Global Report Mortality Attributable to Tobacco (2012), p 8 http://apps.who.int/iris/bitstream/10665/44815/1/9789241564434_eng.pdf

What is The Snus Commission?

The Snus Commission is an independent commission that produces reports on issues related to Swedish snus. The Commission is financed by the Swedish Association of Snus Manufacturers – a coalition of companies in Sweden that manufacture, market and sell snus. However, since the Commission's reports, analyses and conclusions are independent of its financiers, those financiers have not been able to read the report in advance nor provide feedback on the contents of the report.

In May 2016, The Snus Commission released its first report: "The health effects of snus". The report assessed current research into the alleged health effects of snus, and noted that using snus does not raise the risk of either cancer or heart and cardiovascular diseases. The Snus Commission also produced a number of recommendations for politicians in the report. A second report was released in December 2016: "The State's issue with snus – the link between information and health". This report described the political proposals to limit commercial freedom of expression, such as exposure bans and neutral tobacco packaging, and how these proposals would negatively affect snus consumption and consumers' ability to obtain correct information.



The Snus Commission's members

Photo: P-O Rosen, Strångnäs



Anders Milton, Chairman of The Snus Commission. Milton is a physician whose former roles include being President and Chairman of the Swedish Medical Association, President of the Swedish Confederation of Professional Associations from 1993 to 2001 and President of the Swedish Red Cross from 2002 to 2005. Milton has also served as the government's investigator into various different issues.
anders.milton@snuskommissionen.se,
+46 70 526 46 02



Christina Bellander, is a journalist who was previously Executive Vice President (EVP) of MTG AB and Head of business development at TV4. She is a Board Member of New Wave Group AB, Mittmedia AB and the Swedish Educational Broadcasting Company.
kinna.bellander@snuskommissionen.se



Göran Johnsson's positions include Chairman of the IF Metall labour union from 1993 to 2005, as well as being a former member of the Social Democratic Party's Executive Committee and a Board Member of Volvo AB. He was the Chairman of Swedish national television broadcaster SVT from 2011 to 2014.
goran.johnsson@snuskommissionen.se



Karl Olov Fagerström, Associate Professor and Researcher into tobacco and nicotine. Fagerström was decorated by the WHO for his initiatives against tobacco and has 150 articles published in peer reviewed journal in the nicotine and tobacco area. He also founded a company that sells smoking cessation products and has held positions at Pharmacia.
karl.fagerstrom@snuskommissionen.se

Approach

The basis used for this report consists of the WHO's own data, which is compiled in the WHO Global Report: Mortality Attributable to Tobacco (2012).

WHO's report as source material

The WHO is the only organisation to provide a compilation of statistics surrounding tobacco-related mortality at EU level. Other source material, for example from EUCAN (<http://eco.iarc.fr/eucan>), provides the number of deaths from cancer but not the proportion specifically attributable to tobacco.

The statistics we refer to here are limited to men. As our intention has been to report the tobacco-related mortality rate and to compare Sweden, where snus is used, to countries where snus is not available as an alternative to cigarettes, it is most relevant to focus on men since it is principally men who use smoke-free tobacco products such as snus. Eighteen percent of the adult male population used snus in Sweden in 2016². Consumption of smoke-free tobacco such as snus among women has generally been a more recent phenomenon. The tobacco habits established several decades ago are those now having an impact on today's statistics into causes of death, and for this reason the male group is more relevant as snus underwent a renaissance in the 1970s and 80s, while use of snus among women initially increased much later. Furthermore, the female group of snus users in Sweden

still constitutes just 4 percent of the population in 2016³.

For our study, we were obliged to adhere to the restriction to people over the age of 30 as used by the WHO. The reason for this restriction is that from a tobacco-related mortality perspective, there is no reason to study people younger than this. Although use of tobacco typically begins in earlier years, it is only after the age of 30 that tobacco-related diseases such as lung cancer begin to occur.

The basis for the material is data from 2004, which represents the WHO's latest statistics in this area and which were published in 2012 in the WHO Global Report: Mortality Attributable to Tobacco⁴. Snus consumption began to increase during the 1970s, reaching a level of 22 percent among men in 2004⁵. A minor reduction has since occurred (from 22 to 18 percent), while the proportion of female snus users in Sweden has remained stable at around 3-4 percent. It is true that smoking has generally decreased in all EU countries, but Sweden – where snus has been available as a substitute – is one of the countries where this reduction has been most evident. Across the EU, smoking decreased by 12 percent among adults between 2002 and 2012, while in Sweden smoking decreased by 25 percent during the same period⁶.

In our first report, "The health effects of snus" (May 2016), we carried out a major review of current research into snus and its

²Tobaksvanor – nationella resultat och tidsserier 2016, (Tobacco habits – national results and time series, 2016) (in Swedish), The Public Health Agency of Sweden, <https://www.folkhalsomyndigheten.se/folkhalsorapportering-statistik/statistikdatabaser-och-visualisering/nationella-folkhalsoenkaten/levnadsvanor/tobaksvanor/>

³Ibid

⁴WHO Global Report: Mortality Attributable to Tobacco (2012)

⁵Tobaksvanor i Sverige, (Tobacco habits in Sweden), The Swedish Council for Information on Alcohol and Other Drugs, CAN, 2014, (In Swedish), <http://www.can.se/contentassets/d8abb62cc1964de8ba9270862dab25a9/rapport151---tobaksvanor-i-sverige.pdf>

⁶OECD: Health at a Glance: Europe 2016, p. 93, and Health at a Glance, Europe 2014, p. 49

alleged connections with various diseases.

This review did not show any support for the conclusion that snus causes cancer or that snus causes heart and cardiovascular diseases. Pregnant women should avoid snus, however, and the effects of a heart attack could be worse for a snus user, for example, even if snus consumption did not in itself increase the risk of the attack. In addition to a review of “all causes of death”, in this report we have chosen to focus on two major categories of disease: cancer and heart and cardiovascular diseases. There are generally three major categories of disease with which smoking is typically associated, with respiratory diseases (mainly chronic obstructive pulmonary disease, or COPD) joining the two categories mentioned above. The notion that respiratory diseases are particularly associated with smoking barely needs supporting with evidence. At some points we report cancer of the lungs, bronchi and trachea separately within the category of cancer. It has at times been alleged that using snus could be associated with cancer of the pancreas,⁷ but in a review by Bertuccio et al. no such connection could be found⁸. Neither was new research in 2017 by Araghi et al. able to establish that consuming snus increased the risk of pancreatic cancer⁹. If such a risk does exist, it must necessarily be minor given that Sweden has the EU’s second lowest occurrence of this type of cancer among men¹⁰.

The WHO estimates the tobacco-related

mortality rate based on facts regarding the difference in mortality between smokers and non-smokers. Consideration is also taken of the prevalence of smoking in the relevant country and the country’s statistics concerning the number of deaths. For more detailed descriptions of the approach taken in the WHO’s calculations, please refer to the WHO Global Report: Mortality attributable to tobacco¹¹.

Results

This country-based comparison within the EU, based on the WHO’s figures, provides very clear results. The tobacco-related mortality rate in the majority of EU member states is more than twice as high as in Sweden, relative to population size. The tobacco-related mortality rate in three countries – Hungary, Estonia and Latvia – is almost four times higher than Sweden relative to population size. In absolute terms, eighteen of the EU’s members states have a higher tobacco-related mortality rate than Sweden, including countries with smaller populations than Sweden, such as Denmark and Bulgaria.

We would like to stress that there is a significant delay between the start of consumption and the effects of disease. Even if the levels of both smokers and snus users were to match Sweden’s level as of tomorrow, the effects of tobacco-related mortality would only be noted several decades from now. This can sadly

⁷Including by the think-tank Tobaksfakta in this text (in Swedish): <http://www.tobaksfakta.se/halsoeffekter-av-snus/> (read 9 April 2017)

⁸Bertuccio P et.al. (2011): Cigar and pipe smoking, smokeless tobacco use and pancreatic cancer: an analysis from the international Pancreatic Cancer Case-Control Consortium, *Annals of Oncology*, Volume 22, Issue 6, pp. 1420-1426, 2011.

⁹Araghi M, et al. (2017): Use of moist oral snuff (snus) and pancreatic cancer: Pooled analysis of nine prospective observational studies. *Int J Cancer*.

¹⁰International Agency for Research on Cancer, Estimated incidence, mortality & prevalence in men, 2012 <http://eco.iarc.fr/eucan/Cancer.aspx?Cancer=15>

¹¹WHO Global Report: mortality attributable to tobacco (2012), p. 7ff

Table 1. Number of deaths attributable to tobacco-related heart and cardiovascular diseases per year, men over 30 in the EU + Norway (2004)

1. Poland	25,658
2. Germany	24,441
3. Romania	15,780
4. Italy	15,264
5. The UK	14,531
6. France	12,527
7. Spain	9,574
8. Hungary	8,576
9. Bulgaria	7,729
10. Czech Republic	5,566

23. Sweden	1,122

Table 2. Number of deaths attributable to tobacco-related cancer per year, men over 30 in the EU + Norway (2004)

1. Germany	41,361
2. France	38,118
3. Italy	37,015
4. The UK	29,241
5. Poland	26,075
6. Spain	25,194
7. Romania	10,991
8. The Netherlands	9,343
9. Hungary	9,181
10. Belgium	7,734

19. Sweden	2,077

act as a disincentive among our political leaders in Europe in terms of bringing about change, as not they but their successors will be the ones who reap the political rewards of a new snus policy.

Tobacco-related heart and cardiovascular diseases

Every member state in the EU has a higher mortality rate due to tobacco-related heart and cardiovascular diseases than Sweden, relative to population size. As compared with Sweden, mortality rates are more than twice as high relative to population size in 25 of the other 27 EU member states. In Spain and France, the mortality rate due to tobacco-related heart and cardiovascular diseases is “only” 94 and 83 percent higher than Sweden respectively. No other country is therefore even close to Sweden’s level in terms of tobacco-related heart and cardiovascular diseases. In ten of the EU’s member states, the mortality rate (the

number of deaths per 100,000 inhabitants) is more than five times higher than in Sweden. These ten countries with considerably higher mortality rates due to tobacco-related heart and cardiovascular diseases are Estonia, Latvia, Lithuania, Poland, Hungary, Czech Republic, Slovakia, Croatia, Romania and Bulgaria. These EU countries in eastern and central Europe have had a high proportion of smokers throughout the 1900s.

Even in absolute terms, most EU countries have a higher number of deaths attributable to tobacco-related heart and cardiovascular diseases than Sweden. The highest number of deaths annually occur in Poland, Germany and Romania (see table 1).

If the EU had the same mortality rate due to tobacco-related heart and cardiovascular diseases as Sweden, around 115,000 lives would be saved in the union each year. The highest number of lives would be saved in Poland, where over 22,000 people would be

saved each year if the tobacco-related mortality rate linked to heart and cardiovascular diseases was at the same level as in Sweden.

Tobacco-related cancer

Every other member state in the EU has a higher mortality rate due to tobacco-related cancer than Sweden, relative to population size. As compared with Sweden, annual mortality rates are more than twice as high in 25 of the other 27 EU member states. In Cyprus and Finland, the tobacco-related mortality rate for cancer relative to population size is higher than in Sweden, but not quite twice.

In absolute terms, the number of deaths attributable to tobacco-related cancer is highest in Germany, France and Italy, as shown in Table 2. Only countries with considerably smaller populations than Sweden have fewer deaths due to tobacco-related cancer in absolute terms.

If the mortality rate for tobacco-related cancer were equivalent to the rate in Sweden in 2004, around 178,000 lives would be saved annually. The highest number of lives would be saved in France (around 26,000 lives annually), Germany (around 23,000 lives annually) and Poland (around 20,000 lives annually) if the mortality rate in these member states matched the rate in Sweden.

We have chosen to report the most commonly occurring types of tobacco-related cancer separately, i.e. tobacco-related cancer of the lungs, bronchi and trachea. Every other member state in the EU has a higher mortality rate due to tobacco-related cancer of the lungs, bronchi and trachea than Sweden, relative to population size. For these types of cancers, the mortality

rate relative to population size is more than double that of Sweden in 25 of the other 27 EU member states. Cyprus, Finland, Portugal and Austria are the only countries where the tobacco-related mortality rate for cancer of the lungs and trachea are not over double that of Sweden in relation to their population size. If the mortality rate for tobacco-related cancer of the lungs, bronchi and trachea were equivalent to the rate in Sweden, around 111,000 lives would be saved annually. The highest number of lives would be saved in Italy, where over 15,000 lives would be saved each year if the mortality rate due to tobacco-related cancer of the lungs, bronchi and trachea matched the Swedish mortality rate.

Total tobacco-related mortality

We have reported the tobacco-related mortality rate for heart and cardiovascular diseases and cancer separately. The total mortality rate for both of these groups is higher in all other EU member states than in Sweden, relative to population size. Sweden also has the lowest proportion of tobacco-related deaths when taking into account all causes of death.

Every other member state in the EU has a higher tobacco-related mortality rate than Sweden, relative to population size. As compared with Sweden, mortality rates are more than twice as high in 24 of the other 27 EU countries. In Estonia, Latvia and Hungary, the mortality rate is more than four times that of Sweden. The countries topping the list generally coincide with the countries that continue to have the highest proportion of smokers in Europe, with Hungary, Latvia and Estonia all reporting over 30 percent of men smoking in 2014 according

¹² OECD: Health at a Glance: Europe 2016, p. 93, http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/health-at-a-glance-europe-2016_9789264265592-en#.WQCswfmGOM8#page93

Table 3. Number of deaths attributable to tobacco per 100,000 inhabitants per year, men over 30, all causes of death in the EU + Norway (2004)

1. Hungary 699
2. Latvia 657
3. Estonia 636
4. Lithuania 573
5. Poland 566
6. Bulgaria 530
7. Croatia 530
8. Romania 510
9. Belgium 490
10. Slovakia 469
-
19. Luxembourg 310
20. Ireland 301
21. Germany 301
22. Malta 292
23. Portugal 288
24. Austria 247
25. Norway 245
26. Finland 237
27. Cyprus 191
28. Sweden 152

to the OECD, compared to the EU average of 26 percent¹². In this context, it should be pointed out that the number of male smokers has been even higher in these countries in the past. If we go back to 2004, which is the year on which the statistics concerning tobacco-related mortality rates in this report are based, the number of smokers in these countries was even higher¹³. This means that fewer people would be saved by a new snus policy introduced by the EU today because fewer people are smoking at the start of the

period, although the relationship between countries would however generally remain, and the gains in terms of saved lives would still be considerable, to say the least.

The lives that have now been lost due to the EU's snus ban in the 1990s cannot be brought back. However, the EU can do a lot to ensure that fewer people today lay the foundations for a premature death by ensuring that more people make the transition from cigarettes to snus. Sweden also has a low tobacco-related mortality rate in absolute terms. According to the WHO's statistics from 2004, 4,267 people in Sweden died from tobacco-related causes that year – a figure that can be compared to Denmark's 6,160, despite Denmark having a lower population. The highest number of tobacco-related deaths per year was in Germany (80,843), Italy (65,444) and the UK (61,890).

If every EU member state had had the same tobacco-related mortality rate as Sweden, many lives would have been saved. Around 355,000 lives would have been saved each year, if the rate of the rest of the EU had been the same as in Sweden.

The highest number of lives would be saved in Poland (around 46,000 lives annually), Germany (around 44,000 lives annually), Italy (around 37,000 lives annually), the UK (around 36,000 lives annually) and France (around 34,000 lives annually) if the mortality rate in these member states matched the rate in Sweden.

The aspect of Sweden's tobacco policy that differs in relation to other EU countries is precisely the consumption of snus. We have also compared the tobacco-related mortality rate with Norway, which is another country

¹³ OECD: Health at a Glance: Europe 2014: p. 49

Table 4. Number of deaths attributable to tobacco (men over 30) per year that could have been spared had tobacco habits been the same as in Sweden, all causes of death (2004)

1. Poland 46,730
 2. Germany 44,473
 3. Italy 37,160
 4. The UK 36,452
 5. France 33,693
 6. Spain 29,081
 7. Romania 23,432
 8. Hungary 16,463
 9. The Netherlands 11,961
 10. Belgium 11,149
-

where snus is consumed, and this provides support for the existence of a positive connection with snus, as the tobacco-related mortality rate is also very low in Norway. Out of all the countries in the comparison, only Sweden, Finland and Cyprus have a lower tobacco-related mortality rate than Norway. If snus had been permitted thirty years ago, the mortality rate today would have been much lower as it would have resulted in a lower proportion of smokers and therefore better public health with fewer tobacco-related deaths.

The consumption of snus in Norway could also likely explain the low tobacco-related mortality rate there – see page 8. In Norway, the proportion of snus users among

men over 30 is 14 percent¹⁴. We put a question mark over the figures for Cyprus, which consistently ranks low in statistics for tobacco-related deaths despite a high proportion of smokers in both the OECD's and WHO's statistics¹⁵.

What do other researchers say?

In our first report, “The health effects of snus” (May 2016), we noted that “Sweden has the highest percentage of snus users in Europe, while also having the lowest percentage of smokers” and that we in Sweden have replaced one kind of tobacco with another more harmless kind.

The connection we highlight in this report, which shows that the proportion of smokers is low in Sweden compared to the rest of the EU and that the number of snus users is high compared to the rest of the EU, is no coincidence. The notion that the high proportion of snus users is due both to the fact that snus is used as a smoking cessation product and as an alternative to cigarettes can be considered to have scientific support, including in a report from the Royal College of Physicians published in 2016. In that report, it was noted that “particularly among men, availability of snus as a substitute to cigarettes has helped to reduce the prevalence of smoking in Sweden”¹⁶. In our first report, we were able to report that Australian researchers, in their study by using Sweden as an example, established that there is a correlation between the increased use of snus and the decreased use of cigarettes – and thus a reduction in mortality caused by tobacco-related ill

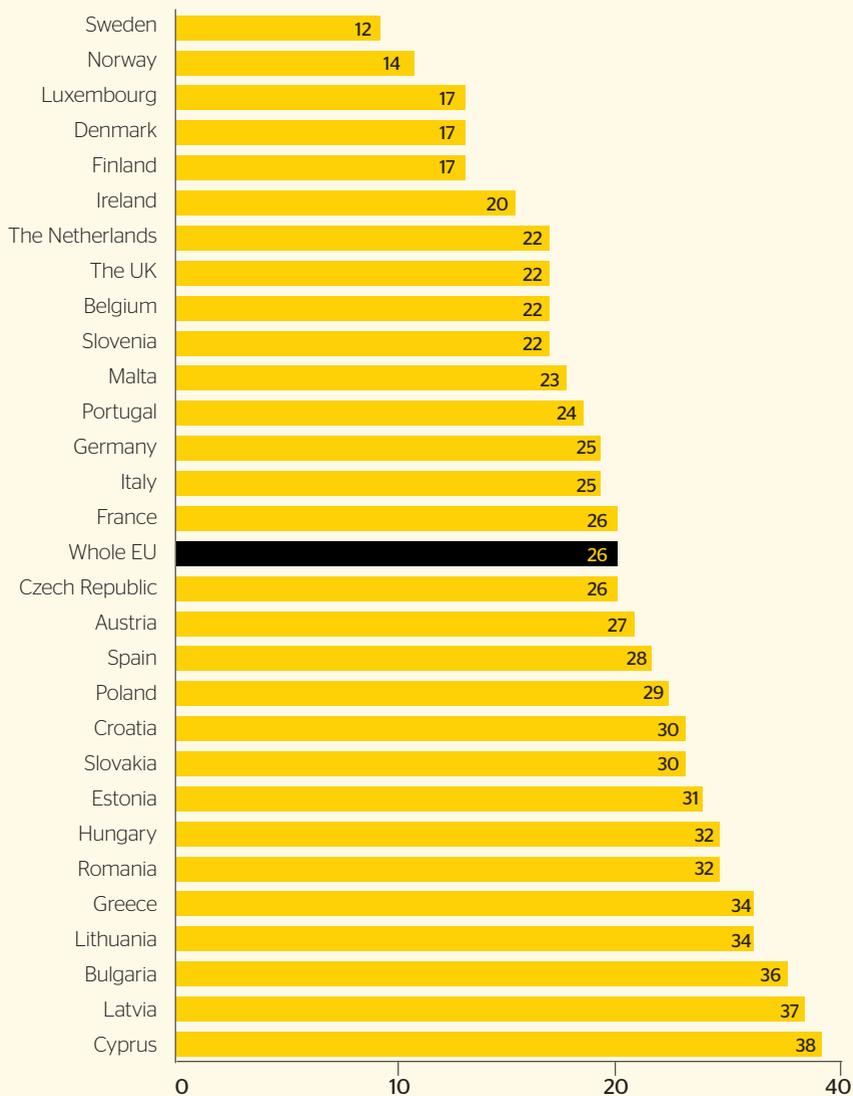
¹⁴ Helseerisiko ved bruk av snus 2014 (Health risks linked to use of snus) (in Norwegian), Norwegian Institute of Public Health, <https://www.fhi.no/globalassets/migrering/dokumenter/pdf/helseerisiko-ved-bruk-av-snus-pdf.pdf>

¹⁵ OECD: Health at a Glance: Europe 2016, p. 93, http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/health-at-a-glance-europe-2016_9789264265592-en#.WQCswfmGOM8#page93

¹⁶ Royal College of Physicians (2016): Nicotine without smoke: Tobacco harm reduction, s. 6

Table 5. Number of people who smoke on a daily basis among men (%)

Proportion in percent among men over 30 in 2014 in the EU + Norway



Source: OECD: Health at a Glance: Europe 2016, p. 93, http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/health-at-a-glance-europe-2016_9789264265592-en#.WQCswf-mGOM8#page93

health. The same researchers also concluded that the health benefits when cigarette smokers switch to smokeless tobacco with a low level of nitrosamines (such as Swedish snus) are almost as great as when these smokers completely abstain from tobacco consumption¹⁷. There are also several other studies that show how low tobacco-related mortality figures in Sweden are consistent with Sweden's high proportion of snus users¹⁸. We can also note that several different studies support the conclusion that snus replaced the cigarettes, thereby yielding positive results for public health in Sweden.

Other researchers have also explicitly calculated the health effects in terms of their influence on the number of premature deaths. In one study, calculations were made concerning how many lives would be saved if snus consumption increased in conjunction with an equivalent fall in the number of cigarette smokers.

Their conclusion was that 200,000 fewer men and 1,100 fewer women would die from tobacco-related diseases each year within the EU if the proportion of smokers and snus users reached the levels registered in Sweden, i.e. if the number of smokers exceeding the Swedish level made the transition to using snus to a greater extent instead¹⁹. These researchers therefore came to slightly lower estimations than the WHO's calculations in this report, but their conclusion points in exactly the same direction: the number of lives that would

be saved if more people used snus and fewer people smoked amount to six-figure levels.

Similar estimates regarding how many lives would be saved if more people switched from cigarettes to snus have also been made by researchers in the US. Modelling conducted by US and Canadian researchers showed how much smoking could be estimated to be reduced in the US if smokeless tobacco with a low level of nitrosamines – as in Swedish snus – were introduced in the US market and marketed using the correct information about its harmfulness. They concluded that a new policy under which smokeless tobacco with a low level of nitrosamines was permitted would result in an accelerating trend towards fewer smokers in the US. The current decline in the number of smokers would accelerate over a five-year period, from 1.3 percent to 3.1. There are thus several studies that point in the direction as our study²⁰.

The Commission's conclusions

Important to highlight the differences in tobacco-related mortality between Sweden and other EU countries

Sweden has both the EU's lowest tobacco-related mortality rate and the EU's lowest proportion of smokers among its adult population. Sweden also distinguishes itself by way of its high proportion of snus users. The notion that the tobacco-related

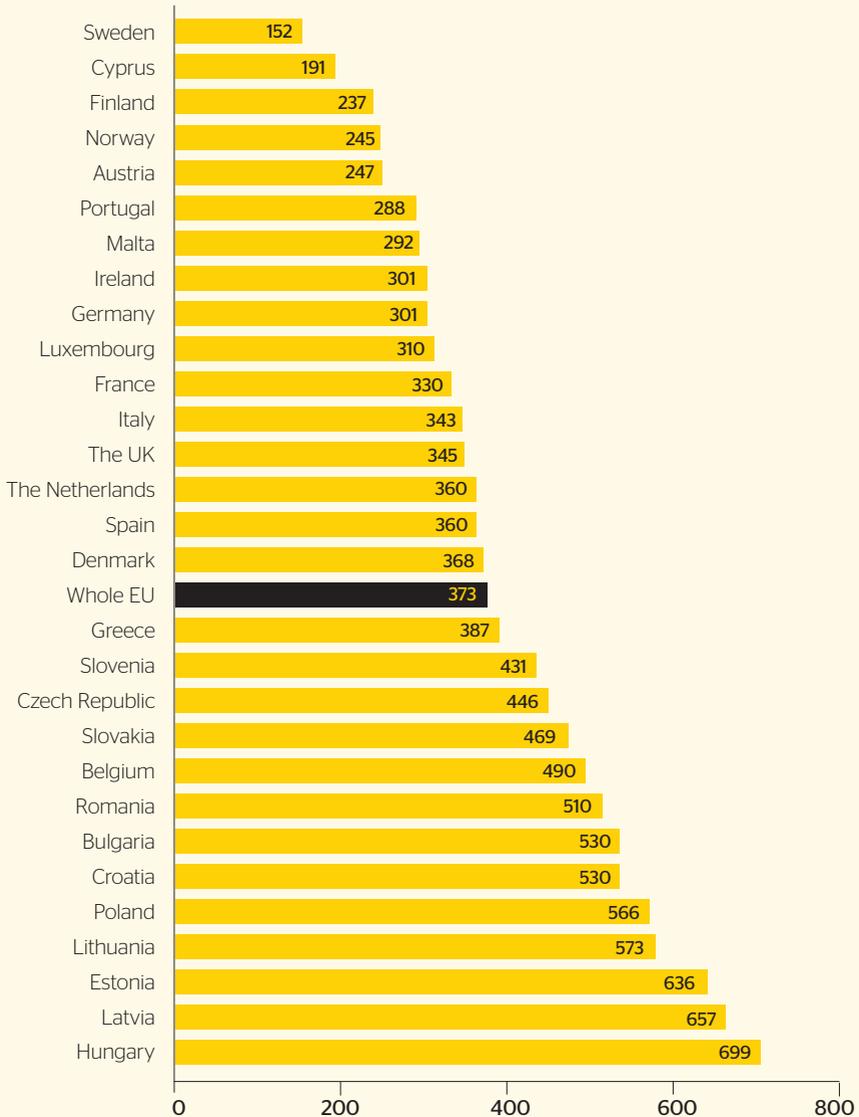
¹⁷ Gartner C, Hall W (2009): Harm reduction policies for tobacco users. *Int J Drug Policy*. 2010 Mar; 21(2):129-30

¹⁸ Ramström, Wikmans (2013): Mortality attributable to tobacco among men in Sweden and other European countries: an analysis of data in a WHO report <https://tobaccoinduceddiseases.biomedcentral.com/articles/10.1186/1617-9625-12-14>

¹⁹ (Rodu B., Cole P. (2004): The burden of mortality from smoking: comparing Sweden with other countries in the European Union. *Eur J Epidemiol*. 2004;19(2):129-31)

²⁰ Levy D, Mumford E, Cummings KM, Gilpin EA, Giovino GA, Hyland A, Sweeney D, Warner KE, Compton C (2005): The potential impact of a low-nitrosamine smokeless tobacco product on cigarette smoking in the United States: Estimates of a panel of experts. *Addict Behav*. 2006 Jul;31(7):1190-200. *Epub* 2005 Oct 26.

Table 6. Mortality attributable to tobacco per 100,000 inhabitants (men over 30) in the EU + Norway, all causes of death



Source: The calculations are based on data in the WHO Global Report: Mortality Attributable to Tobacco (2012)

mortality rate is consistent with the number of smokers is indisputable. In this report, we show that there is clear support for the theory that Sweden's low number of smokers is a result of its high number of snus users. The role of snus as a means of stopping smoking and as an alternative to cigarettes has made a positive contribution to the health of people in Sweden. We have been able to show in this report that the low tobacco-related mortality rate applies both generally and to both the heart and cardiovascular disease and cancer groups respectively.

Time for European politicians to reconsider the ban on snus in the EU

In light of the fact that Sweden clearly has a lower tobacco-related mortality rate than other countries, the question arises as to what it is that distinguishes us. The only real difference with respect to tobacco is that Sweden permits the use of snus. This report shows that snus has played an important role in public health as an alternative to cigarettes and as a means to stop smoking, which is why there are very strong grounds for the EU to consider a review of the ban on snus in the EU.

Lifting the ban would, according to the calculations that we report here, eventually save hundreds of thousands of lives per year within the EU.

The Swedish government should promote snus within the EU

In light of Sweden's low tobacco-related mortality rate, it is surprising that the Swedish government does not promote snus within the EU more often and more purposefully. Sweden fought to keep snus available when joining the EU, despite the fact that we did not know everything we know now about the health effects of replacing cigarettes with

snus. There are grounds for the Swedish government to bring this to the EU's attention, not least because if Sweden is to maintain its snus exemption in the long term, its case may need to be highlighted regularly at EU level.

The EU has shown in various policy areas that it does not always have a thorough understanding of the circumstances in Sweden, so it is up to Swedish politicians to inform them and explain how it works – that snus has contributed to Sweden's low levels of tobacco-related mortality.

EU citizens should be offered information about the health effects of snus

Snus has a significantly lower impact on a person's health than cigarettes. The EU has banned the wrong tobacco product. The difference is so large that it is, in fact, problematic to talk about snus and cigarettes as part of the same category – tobacco. The focus would be better placed on combatting consumption of smoking tobacco within the EU. Instead, the ban has been placed on snus which could serve as an effective smoking cessation product for EU citizens. Let EU citizens choose for themselves whether they want to use snus or not, and let EU citizens access correct information about the impact on health of both snus and cigarettes. More information would be a positive thing for both consumers and public health, not a danger.

Different nicotine products are not treated in a fair manner

There is epidemiological research into snus – a product that is not permitted within the EU. There is, however, no equivalent research into e-cigarettes, for example, despite them being permitted within the EU

and released as a new product. Nor are the regulations proportional with respect to the impact on health of different nicotine products, with cigarettes – that have a major impact on health – permitted in every EU member state while snus – that has a very limited impact – only permitted in Sweden.

Arguments against the release of new tobacco products have collapsed

During Sweden's negotiations for EU membership, the EU wanted to maintain its general ban on snus and offer Sweden an exemption from that rule, instead of removing the general ban. This was due to the fact that the EU did not want to establish new tobacco products in EU countries. This argument has now collapsed as the EU recently permitted e-cigarettes to enter the market, and the issue of permitting snus within the EU has thereby been reawakened.

Statistical basis: Tobacco-related mortality among men over 30 in the EU, 2004

The calculations are based on data in the WHO Global Report: Mortality Attributable to Tobacco (2012)

Explanation of the tables: In the tables on the following pages, the number of deaths attributable to tobacco in different cause of death categories are presented for men aged 30 or above in EU countries and Norway.

The numbers have been calculated based on data presented in the WHO report for five different age groups in terms of population size and number of deaths attributable to tobacco (number per 100,000 people) in different cause of death categories. The number of deaths attributable to tobacco has been calculated as the total of the numbers in the individual age groups. For each country, calculations have been made for two different scenarios. The first refers to the relevant number of deaths according to the country's reported mortality rate. The second scenario refers to the expected number of deaths if the equivalent Swedish mortality rate had applied in that country.

In the "All causes of death" category, the number of deaths per 100,000 people is also stated, i.e. that country's mortality rate. This enables us to make broad comparisons between countries in terms of the extent of mortality attributable to tobacco, regardless of differences in population.



Appendix A. Table 7. Number of tobacco-related deaths, heart and cardiovascular diseases among men over the age of 30 in the EU + Norway, 2004

Country	Population (number of men over 30, millions)	Tobacco-related deaths per year, heart and cardiovascular diseases	If in line with Swedish mortality rate
Belgium	3,196	3.739	1.238
Bulgaria	2,371	7.729	959
Cyprus	0,221	183	79
Denmark	1,674	1.841	623
Estonia	0,358	1.178	132
Finland	1,589	1.255	608
France	17,896	12.527	6.834
Greece	3,484	4.564	1.411
Ireland	1,092	863	369
Italy	19,080	15.264	7.549
Croatia	1,349	2.779	526
Latvia	0,624	2.346	228
Lithuania	0,916	2.574	322
Luxembourg	0,138	120	48
Malta	0,116	89	42
The Netherlands	5,050	4.293	1.773
Poland	10,430	25.658	3.673
Portugal	3,107	2.392	1.209
Romania	6,140	15.780	2.296
Slovakia	1,459	3.137	479
Slovenia	0,609	834	220
Spain	13,260	9.574	4.966
The UK	17,939	14.531	6.833
Sweden	2,807	1.122	1.122
Czech Republic	3,025	5.566	1.100
Germany	26,858	24.441	10.378
Hungary	2,878	8.576	1.060
Austria	2,597	1.584	929
Whole EU	150,263	174.539	57.006
Norway	1,386	790	503

Appendix B. Table 8. Tobacco-related deaths, cancer among men over the age of 30 in the EU + Norway, 2004

Country	Population (number of men over 30, millions)	Tobacco-related deaths per year, cancer of the lungs, bronchi and trachea	If mortality rate were in line with Swedish rate	Tobacco-related deaths per year, cancer total	If mortality rate were in line with Swedish rate
Belgium	3,196	5.465	1.493	7.734	2.226
Bulgaria	2,371	2.442	1.139	3.770	1.693
Cyprus	0,221	122	93	170	140
Denmark	1,674	1.841	743	2.829	1.110
Estonia	0,358	494	150	816	283
Finland	1,589	1.224	699	1.764	1.041
France	17,896	22.012	8.299	38.118	12.421
Greece	3,484	4.947	1.738	7.107	2.586
Ireland	1,092	928	427	1.441	638
Italy	19,080	24.232	9.366	37.015	13.958
Croatia	1,349	2.077	601	3.292	891
Latvia	0,624	842	260	1.404	385
Lithuania	0,916	1.099	372	1.878	551
Luxembourg	0,138	141	55	218	82
Malta	0,116	106	47	150	71
The Netherlands	5,050	6.313	2.056	9.343	3.068
Poland	10,430	16.792	4.073	26.075	6.079
Portugal	3,107	2.454	1.467	4.319	2.184
Romania	6,140	6.447	2.651	10.991	3.934
Slovakia	1,459	1.576	529	2.889	790
Slovenia	0,609	816	246	1.285	366
Spain	13,260	16.045	6.152	25.194	9.181
The UK	17,939	18.298	8.370	29.241	12.502
Sweden	2,807	1.404	1.404	2.077	2.077
Czech Republic	3,025	4.084	1.245	6.443	1.854
Germany	26,858	26.589	12.312	41.361	18.225
Hungary	2,878	5.555	1.215	9.181	1.810
Austria	2,597	2.078	1.104	3.350	1.644
Whole EU	150,263	176.423	65.674	279.455	101.790
Norway	1,386	1.137	611	1.677	917

Appendix C. Table 9. Total tobacco-related deaths among men over the age of 30 in the EU + Norway, 2004

Country	Population (number of men over 30, millions)	Tobacco-related deaths per year	If mortality rate were in line with Swedish rate	Different in no. of deaths
Belgium	3,196	15.660	4.511	-11.149
Bulgaria	2,371	12.566	3.406	-9.160
Cyprus	0,221	422	284	-138
Denmark	1,674	6.160	2.254	-3.906
Estonia	0,358	2.277	445	-1.832
Finland	1,589	3.766	2.105	-1.661
France	17,896	59.057	25.364	-33.693
Greece	3,484	13.483	5.223	-8.260
Ireland	1,092	3.286	1.292	-1.994
Italy	19,080	65.444	28.284	-37.160
Croatia	1,349	7.150	1.781	-5.369
Latvia	0,624	4.100	767	-3.333
Lithuania	0,916	5.249	1.105	-4.144
Luxembourg	0,138	428	164	-264
Malta	0,116	339	144	-195
The Netherlands	5,050	18.180	6.219	-11.961
Poland	10,430	59.034	12.304	-46.730
Portugal	3,107	8.948	4.410	-4.538
Romania	6,140	31.314	7.882	-23.432
Slovakia	1,459	6.843	1.600	-5.243
Slovenia	0,609	2.625	734	-1.891
Spain	13,260	47.736	18.655	-29.081
The UK	17,939	61.890	25.438	-36.452
Sweden	2,807	4.267	4.267	0
Czech Republic	3,025	13.492	3.738	-9.754
Germany	26,858	80.843	36.370	-44.473
Hungary	2,878	20.117	3.654	-16.463
Austria	2,597	6.415	3.319	-3.096
Whole EU	150,263	561.091	205.719	-355.372
Norway	1,386	3.396	1.880	-1.516



The Snus Commission's third report - June 2017
Read more at www.snuskommissionen.se
info@snuskommissionen.se

Anders Milton, anders.milton@snuskommissionen.se, +46 (0)70 526 46 02

Christina Bellander, kinna.bellander@snuskommissionen.se

Göran Johnsson, goran.johnsson@snuskommissionen.se

Karl Olov Fagerström, karl.fagerstrom@snuskommissionen.se